Merco Savory

Enodis

PARTS & SERVICE MANUAL for RT-2AR

"Adjustable Range" Toaster

The information found in this Manual will prove very helpful. Although the instructions are easy to follow, all repair procedures should be carried out by a qualified Merco/Savory Certified Service Representative.

The RT-2AR should be placed in the most convenient location for ease of cleaning, maintenance, service and general operation. Careful consideration should be given to avoid drafts, close proximity to grease or vapor-producing appliances or high ambient heat equipment. Minimum of ½" clearance is required for air circulation. This is assured by the rounded "acorn" nuts protuding from the sides and rear. Overhead clearance from the top of the toaster should be as much as possible and sufficient to allow heat dissipation.

DESCRIPTION	Part#	Qty	DESCRIPTION	Part#	Qty
Inf Control 208V	14702	2	Cordset, 6-30P	21221	1
Inf Control 240V	12355	2	Light Pilot 208/240V	51070	2
Knob Inf Control	12919	2	Bearings	22754	4
Element upper 890W 208V *	21103	2	Wire harness kit(wires only)	12933	1
Element upper 890W 240V *	21105	2	Jumper	21358	4
Element assy lower 208V	12618	1	Terminal block	21858	1
Element assy lower 240V	12620	1	Drive chain 54 links	12412	1
Element lower 1200W 208V *	12126	2	32T sprocket assy	21319	1
Element lower 1185W 240V *	21103	1	8T sprocket asst	30494	1
Element assy upper 208V	12254	1	Front trim, left side	12219	1
Element assy upper 240V	12266	1	Legs 1" plastic	12668	4
Motor 208/240V	22743	1	Control panel	12060	1
Speed control 208/240V	21842	1	Control panel decal	12061	1
Switch, toggle DPST 20a	68117	1	Savory logo	12523	1
Knob, speed control	12447	1	Savory lubricant	21720	1

A Case Removal

1. Remove reflector tray, toast pan and delivery chute.
2. Remove the 2 screws along the front trim panel and remove.
3. Remove left front panel.
4. Remove the 4 screws holding control panel to unit and carefully pull panel towards you with all wires intact. Slide control panel towards center of unit.
5. With hands on each side of case, pull forward to remove.

B Case Replacement

1. Slide case over unit making sure tabs on the sides and top of case fit into grooves on back of unit.
2. Carefully replace control panel.
3. Replace left front panel and front trim panel.
4. Replace reflector tray, toast pan and delivery chute.

C On/Off (Main Power) Switch

1. With control panel removed (Section A), remove the 2 slotted screws holding the on/off switch to the control panel.
2. Disconnect wires and remove switch.
3. Install new switch from rear of panel and reconnect wires. (Refer to appropriate wiring diagram)

D Conveyor On/Off Switch

1. With control panel removed (Section A), disconnect wires to switch noting proper orientation.
2. Remove bezel from front of panel, and push switch through back of panel.
3. Insert new switch from back of panel. **NOTE: Be sure terminals are in correct position.**
4. Attach bezel on front of panel and tighten.
5. Re-attach wires to switch. (Refer to appropriate wiring diagram)

E Infinite Control Switch

1. With control panel removed (Section A), remove the infinite control knob to gain access to the 2 slotted screws that hold the control to the unit. Remove those 2 screws.
2. Disconnect wires from infinite switch terminals.
3. Install new switch from back of panel and re-attach wires. (Refer to appropriate wiring diagram)

NOTE: The two (2) infinite controls on the RT-2AR model serve as on/off switches to the heating elements. The upper infinite knob controls the upper elements and the lower infinite knob controls the lower heating elements.

F Speed Control/P.C. Board Assembly

NOTE: The speed control and P.C. board are wired together and must be replaced as an assembly.

1. With control panel removed (Section A), loosen set screw on speed control knob and remove.
2. Remove retaining nut that holds speed control in place and remove from back of panel.
3. Disconnect motor lead and on/off lead from P.C. board terminals.
4. Remove the 2 screws and nuts holding P.C. board to floor of unit and remove assembly.
5. Reverse this procedure to install new assembly. (Refer to appropriate wiring diagram)

P.C. Board Adjustment

The P.C. board is factory set and should not require adjustment. If speed control range appears faulty, the following procedure should be carried out:

1. Turn speed control knob clockwise until it stops.
2. Connect to power source and turn unit on.
3. Turn trimmer adjustment to right to start conveyor motor running. Now turn trimmer adjustment screw to the left to slow conveyor motor. Continue turning screw until motor just stops. Adjustment is now completed. All further adjustments can be made by operating at the speed control knob.

SPECIAL NOTICE: The RT-2AR is no longer built with the P.C. board installed. To wire or convert units with the old style assembly, which included a resistor and/or P.C. board, do the following: The Gearmotor, which has 2 black wires, one is plugged into the white side of the terminal block, and the other one is spliced togeather with the black wire off the Conveyor Speed Control POT. Then the blue wire off the Conveyor Speed Control POT, is attached to the On/Off Switch.

G Gearmotor

1. With outer case removed (Section A), disconnect motor leads from on/off switch and Conveyor speed control and cut wire ties at floor panel.
2. Remove the 2 retaining bolts from the underside of the unit.
3. Remove the drive chain and lift out the motor.
4. Separate motor from motor mounting bracket by removing the 4 slotted screws on the bracket.
5. Using a 1/16" Allen wrench, remove the drive sprocket from the motor shaft.
6. Attach new gearmotor to motor mounting bracket.
7. Install drive sprocket on motor shaft making sure the Allen screw rests on the flat of the shaft. **DO NOT** tighten set screw.
8. Install new motor with bracket attached. **DO NOT** tighten retaining bolts.
9. Replace drive chain over sprockets.
10. Slide motor to right until drive chain is taut. There should be approximately ¼" play in the drive chain. Tighten retaining bolts on underside of unit.
11. Check drive chain alignment. Tighten drive sprocket set screws.
12. Re-attach motor leads to on/off switch and Conveyor speed control. (Refer to appropriate wiring diagram)

H Drive Chain

1. With outer case removed (Section A), loosen the 2 motor mounting bracket retaining bolts on underside of unit, but do **NOT** remove.
2. Slide motor to the left to loosen drive chain tension.
3. Remove drive chain.
4. Install new chain over sprockets with open looped side of chain facing out.
5. Slide motor to right to tighten drive chain tension. There should be approximately ¼" plat in the drive chain.
6. Check for proper drive chain alignment. (See Figure 6 & 7)
7. Tighten motor mounting bracket retaining bolts on underside of unit.

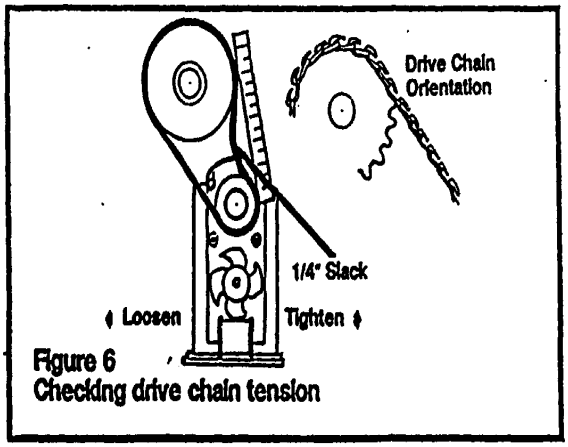


Figure 6
Checking drive chain tension

I Drive (Motor) Sprocket

NOTE: RT-2AR model use an 8T sprocket

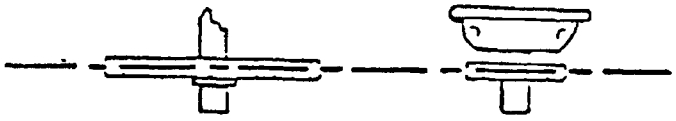
1. With outer case removed (Section A), and drive chain removed (Section H) loosen the set screw on sprocket with a ¼" Allen wrench and removed sprocket.
2. Install new sprocket on motor shaft making sure Allen screw rests on the flat of the shaft.
3. Replace drive chain. (Section H)

J Rear (Conveyor) Shaft Sprocket

NOTE: RT-2AR model use an 32T sprocket

1. With outer case removed (Section A), and drive chain removed (Section H), loosen the 2 set screws on sprocket with a 1/16" Allen wrench and remove sprocket.
2. Install new sprocket on conveyor shaft aligning the 2 set screws with the holes on the shaft.
3. Replace drive chain. (Section H)

Figure 7



Correct alignment of motor and shaft sprockets

K Conveyor Chain

(Figure 8)

1. With outer case removed (Section A), loosen motor mounting bracket retaining bolts on underside of unit, and slide motor to the left.
2. Loosen rear shaft adjusting bracket nuts and bearing retaining bracket nuts on both sides of unit.
3. Slide rear conveyor shaft forward to loosen tension.
4. Separate the chain at any link and slide out from front of unit.
5. Before installing new chain, check for proper orientation (See Figure 8), and correct number of links.
6. Starting at front of unit, slide chain under front shaft and push towards rear of unit. Bring chain up and over rear shaft assembly and pull towards front. Connect links. **CAUTION: MAKE SURE CHAIN IS NOT INSTALLED AT AN ANGLE.**
7. Push back on rear shaft assembly until excess slack is removed from chain. Holding tension, tighten both the rear shaft adjusting brackets and bearing retaining brackets on both sides of unit.
8. Check for proper tension. There should be approximately 3/8" to ¾" space between the conveyor chain and the ledge on the inside of the unit cavity.
9. Slide motor to the right to tighten drive chain tension. There should be approximately ¼" play in the drive chain.
10. Tighten motor mounting bracket retaining bolts on underside of unit.

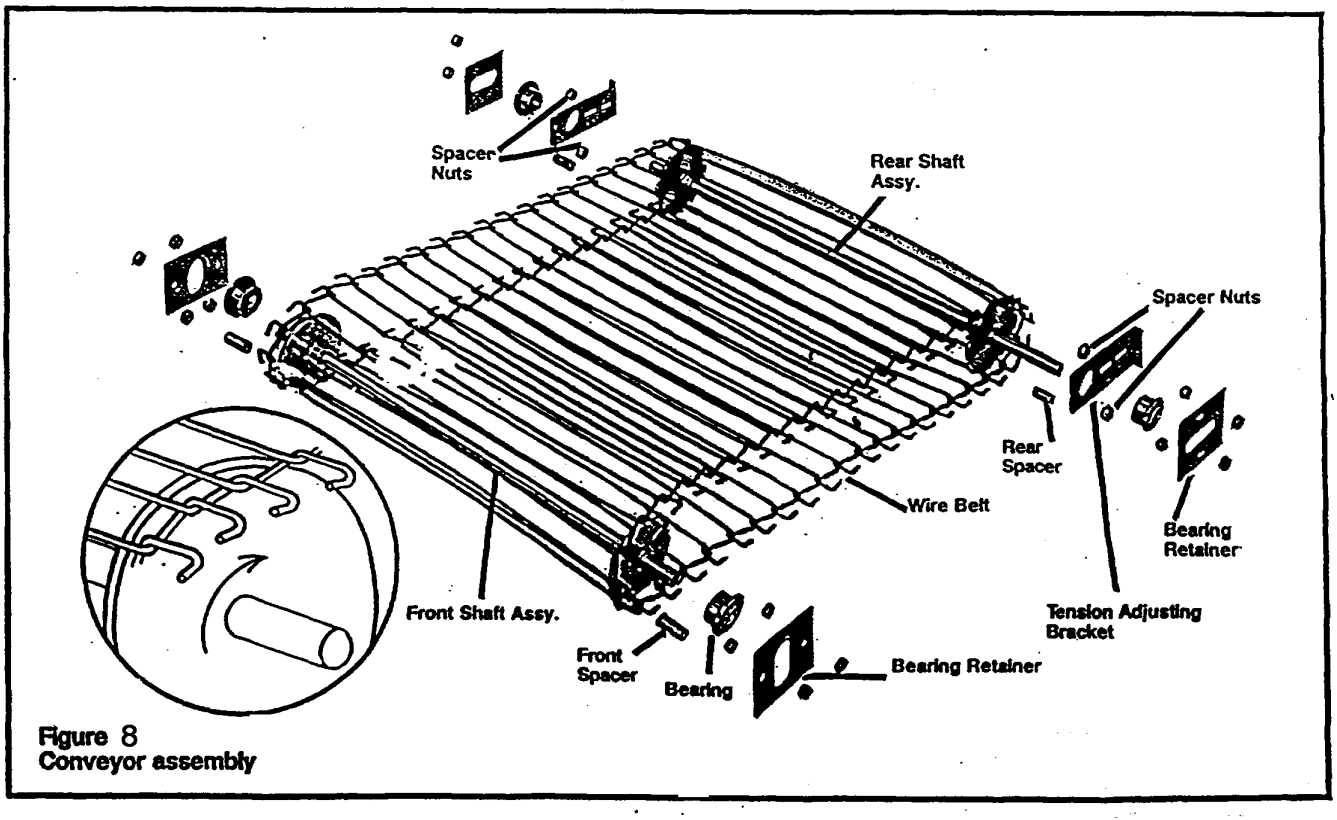


Figure 8
Conveyor assembly

L Front and Rear Shaft and Bearings

(Figure 8)

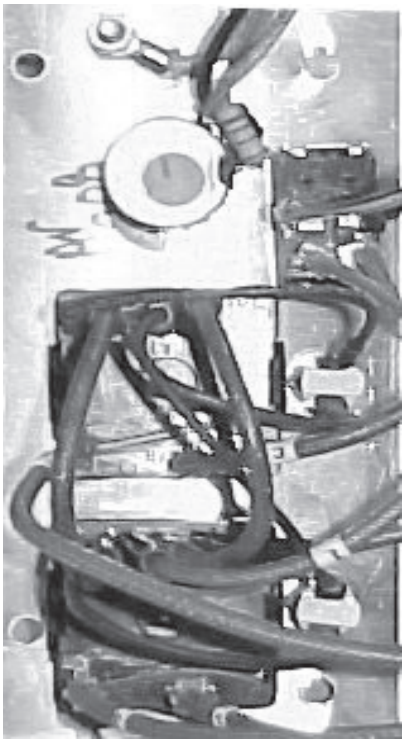
1. Remove outer case (Section A), and conveyor chain (Section K).
2. **To remove front shaft bearings:** first remove the bearing retainers on both sides of unit.
3. With retainers removed, slide bearing out (with shaft if necessary). Note proper location of the spacer washers on the front bearing retainer studs.
4. Replace bearings (and front shaft if necessary).
5. **To remove rear shaft bearings:** remove drive chain (Section H), and conveyor shaft sprocket (Section J).
6. Remove bearing retainer brackets at both sides of unit and slide bearings out. Shaft can be replaced at this time if needed. Note proper orientation of hex head spacers.
7. Replace bearings (and rear shaft if necessary), shaft sprockets and drive chain (Section H).
8. Replace conveyor chain (Section K).

CONTROL PANEL FRONT VIEW

M Power-On Light

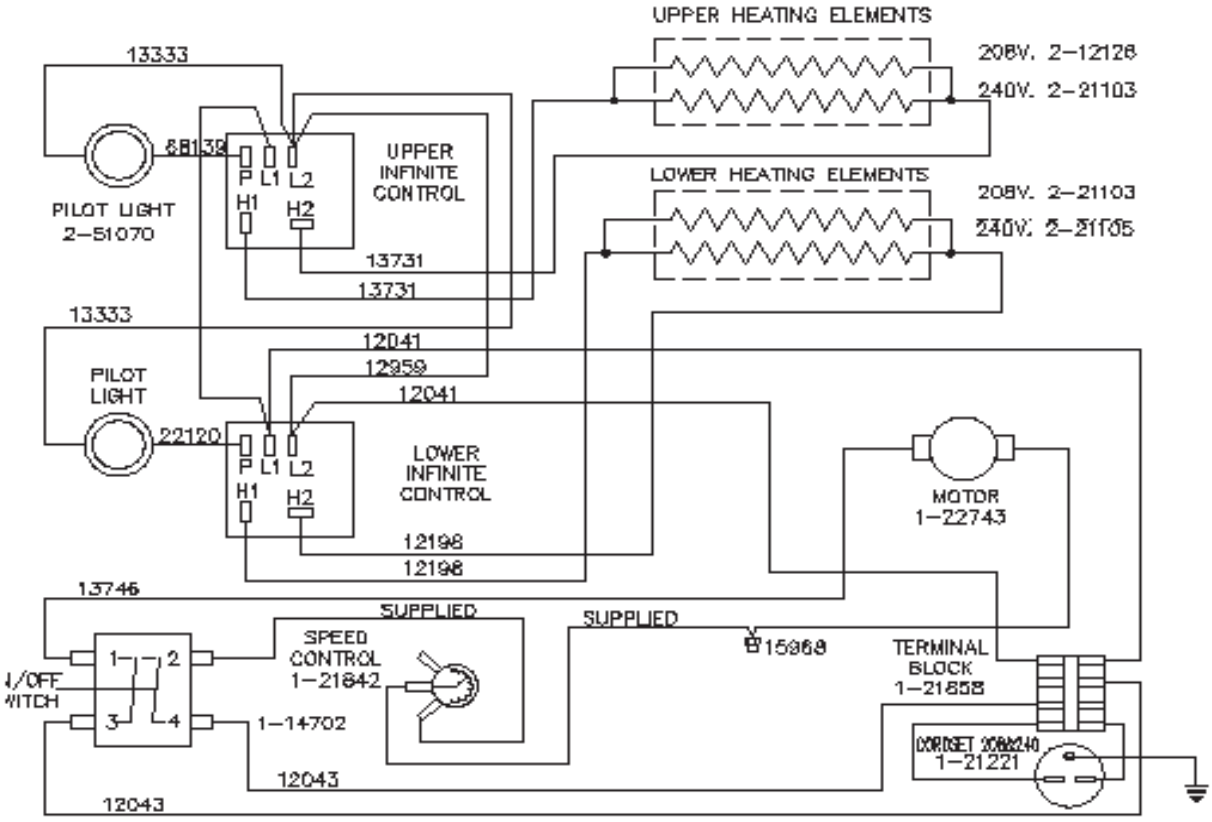
1. With control panel removed (Section A), disconnect wire leads from back of light.
2. Press spring loaded tabs on back of light and push light through front of panel.
3. Insert new light from front of panel and snap into place.
4. Re-attach wire leads. (Refer to appropriate wiring diagram)

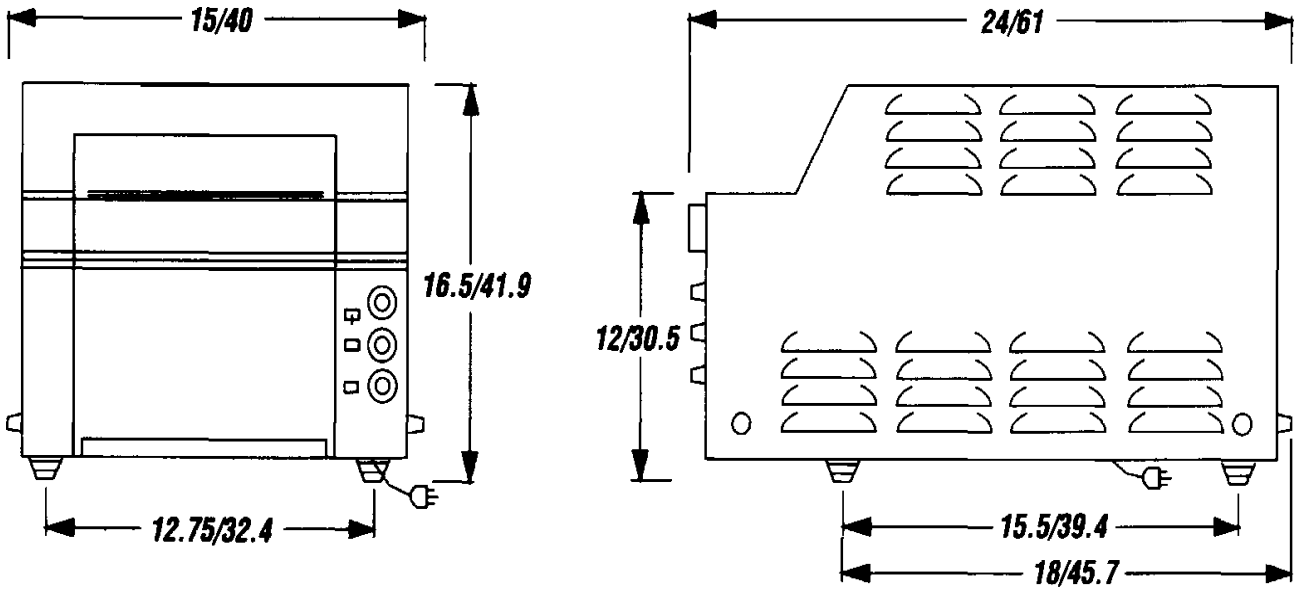
CONTROL PANEL REAR VIEW



Problem	Possible Causes	Suggested Remedies
No heat, conveyor belt does not run	1. Defective or improper electrical outlet. 2. Defective plug or line cord. 3. Defective on/off switch.	1. Check voltage at receptacle. Check that voltage conforms to Savory specifications on unit data plate. 2. Check plug and line cord. Replace if necessary. 3. Replace switch.
Unit fails to heat	1. Defective infinite control switch. 2. Defective heating elements. 3. Defective, loose, or improper wiring or terminal block.	1. Replace switch. 2. Replace elements. 3. Check wiring and terminal block for improper connections or defects. Refer to wiring diagram.
Insufficient heat or no heat from upper or lower heaters	1. Defective heating elements. 2. Defective or improper wiring or terminal block.	1. Turn unit on and set heat at #9. Observe elements after a 15 minute warm-up period. Replace any element that does not glow. 2. Check wiring and terminal block for improper connections or defects. Refer to wiring diagram.
Heat stays high, cannot be regulated	1. Defective infinite control switch.	1. Replace switch.
Conveyor belt is excessively noisy and/or does not run smoothly	1. Worn shaft bearing(s). 2. Incorrect conveyor belt tension. 3. Incorrect alignment of drive chain, gearmotor, or sprockets. 4. Worn sprockets and/or drive chain.	1. Replace bearing(s). 2. Adjust tension. 3. Adjust alignments. 4. Replace sprockets and/or drive chain.

Problem	Possible Causes	Suggested Remedies
Conveyor belt does not run	1. Misaligned or bent motor fan blade.	1. Check for proper alignment of fan blade. Adjust or replace if necessary.
	2. Defect in one or more of the following: a) wiring b) terminal block c) speed control d) printed circuit board e) gearmotor f) conveyor on/off switch	2. Connect AC voltmeter to gearmotor terminals. Rotate speed control to maximum. Meter reading of 208/240V indicates problem is NOT items (a) through (d). Replace gearmotor. If reading of 208/240V is not obtained, check in sequence starting with item (a) until defect is isolated. Replace any defective components. Refer to wiring diagrams. Check all connections.
Cannot regulate speed of conveyor belt	1. Defective speed control and p.c. board assembly	1. Replace speed control and p.c. board. NOTE: Speed control and p.c. board should be replaced as an assembly.
Gearmotor runs but conveyor belt slips or does not run	1. Loose sprocket(s).	1. Tighten sprocket(s).
	2. Broken drive chain.	2. Replace drive chain.
	3. Disengaged drive chain.	3. Adjust drive chain.
Cannot adjust heat for bun toasting (For buns, only the upper heaters should function).	1. Defective bun/toast switch.	1. Replace switch.





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